

## **CLAIMS**

What is claimed is:

1. A process comprising
  - a) bringing together a reagent containing antibodies made against a mixture of proteomic cancer markers with a human saliva sample to form an assay sample, and
  - b) determining whether an immunological reaction has occurred in the assay sample.
2. A process as in claim 1 further wherein an ELISA test is conducted on the assay sample and ELISA test results are produced to determine whether an immunological reaction has occurred in the assay sample.
3. A process as in claim 2 wherein the ELISA test results are selected from titer and binding affinity and positive results are indicative of the occurrence of an immunological reaction in the assay sample.
4. A process as in claim 1 further comprising
  - a) providing a colony of cancer cells,
  - b) extracting at least one proteomic cancer marker from said colony;
  - c) forming antibodies against said at least one proteomic cancer marker; and
  - d) forming the reagent from said antibodies.
5. A process as in claim 4 wherein the colony of cancer cells is formed from a publicly available cancer cell line.
6. A process as in claim 5 wherein the cell line is selected from the group consisting of a breast cancer cell line, a liver cancer cell line, a colon cancer cell line, and an ovarian cancer cell line.
7. A process as in claim 4 wherein the antibodies are polyclonal antibodies.
8. A process as in claim 7 wherein the polyclonal antibodies are produced in animals.

9. A process as in claim 8 further comprising separating blood containing the polyclonal antibodies from the animals and separating serum containing the polyclonal antibodies therefrom.
10. A process as in claim 9 further comprising forming the reagent from the serum.
11. A process as in claim 1 further comprising centrifuging a human saliva specimen to separate out cells and mucin and collecting the supernatant to form the human saliva sample.
12. A process as in claim 11 further comprising collecting the human saliva specimen.
13. A process as in claim 4 further comprising  
combining at least a portion of the colony of cells with a carrier fluid,  
agitating the carrier fluid to disrupt the cells and form a suspension,  
centrifuging the suspension to separate out cell debris and nuclei and  
collecting the supernatant to complete the extracting of the at least one proteomic cancer marker from the colony.
14. A process as in claim 13 further comprising  
conducting the centrifuging step in two stages, to separate out cell debris in the first stage  
and nuclei in the second stage, and  
introducing a portion of the supernatant into the animals to be used to form the polyclonal antibodies.
15. A process as in claim 1 wherein the reagent contains antibodies made against a plurality of proteomic cancer markers.
16. A non-invasive cancer screening method comprising
  - a) obtaining a saliva specimen from a patient,
  - b) forming a saliva sample from the saliva specimen,
  - c) bringing the saliva sample together with a reagent containing antibodies made against a plurality of proteomic cancer markers from different types of cancer cells to form an assay sample; and
  - d) determining whether an immunological reaction has occurred in the assay sample.

17. A method as in claim 16 wherein the step of determining is carried out by simple ELISA test to obtain ELISA test results.

18. A method as in claim 17 wherein the ELISA test results are selected from titer and binding affinity and positive results are indicative of the occurrence of an immunological reaction in the assay sample.

19. A method as in claim 18 wherein obtaining ELISA test results above a predetermined value are indicative of a positive screening test for cancer.

20. A method as in claim 19 further comprising, in a case where the ELISA test results are above the predetermined value,

- a) obtaining a second saliva specimen from the patient,
- b) forming a second saliva sample from the second saliva specimen,
- c) separating the second saliva sample into a plurality of portions,
- d) bringing the portions of the second saliva sample together with a plurality of second reagents, a single reagent being brought together with each portion, each reagent containing a separate slate of antibodies made against proteomic cancer markers from different types of cancer cells, one type of cancer cells being used to form each slate of antibodies, to form a plurality of assay samples;
- e) conducting a simple ELISA test on each of the plurality of assay samples to obtain an ELISA test result on each of the plurality of assay samples,
- f) identifying a most highly positive test result, and
- g) associating the most highly positive test result with the type of cancer cells used to produce the antibodies yielding such results.

21. A cancer diagnostic method comprising

- a) obtaining a saliva specimen from a patient,
- b) forming a saliva sample from the saliva specimen,
- c) separating the saliva sample into a plurality of portions,
- d) bringing the portions of the saliva sample together with a plurality of reagents, a single reagent being brought together with each portion, each reagent containing a separate slate of antibodies made against proteomic cancer markers from different types of cancer cells, one type of cancer cells being used to form each slate of antibodies, to form a plurality of assay samples;

- e) conducting a simple ELISA test on each of the plurality of assay samples to obtain an ELISA test result on each of the plurality of assay samples,
- f) identifying a most highly positive test result, and
- g) associating the most highly positive test result with the type of cancer cells used to produce the antibodies yielding such results to provide the diagnosis.

22. A method for monitoring effectiveness of cancer treatment, said method comprising

- a) obtaining a first saliva specimen from a patient,
- b) forming a first saliva sample from the first saliva specimen,
- c) bringing the first saliva sample together with a reagent containing antibodies made against at least one proteomic cancer marker made from a single cancer cell line to form a first assay sample,
- e) conducting a simple ELISA test on the first assay sample to obtain a first ELISA test result on the first assay sample,
- f) treating the patient for a cancer represented by the cancer cell line used to make the proteomic cancer marker, and, after a period of time of at least one week,
- g) obtaining a second saliva specimen from the patient,
- h) forming a second saliva sample from the second saliva specimen,
- i) bringing the second saliva sample together with the reagent to form a second assay sample,
- j) conducting a simple ELISA test on the second assay sample to obtain a second ELISA test result on the second assay sample, and
- k) comparing the second ELISA test result with the first ELISA test result to determine the effectiveness of the cancer treatment.

23. A method as in claim 22 wherein the ELISA test results are selected from titer and binding affinity and a lower value for the second test results is indicative of effective cancer treatment.